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| 10/690,296      | 10/21/2003  | Takuro Sekiya        | 2271/71291          | 8028             |

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EXAMINER

LIANG, LEONARD S

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2853

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/690,296

Applicant(s)

SEKIYA, TAKURO

Examiner

Leonard S. Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 08/25/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification and Drawings***

A jumbo specification objection was previously made requesting that the applicant review the specification and drawings to make sure that they were error-free. The examiner will assume that the applicant has done so and will hereby remove the objections to the specification and drawings.

### ***Claim Objections***

Claim 21 is objected to because of the following informalities: The claim states "wherein said ink-jet recording apparatus which enables the printing unit to print images on the recording medium such that the vertical orientations of the images formed on both sides of the recording medium are coincide with each other, wherein said ink-jet recording apparatus which enables the printing unit to print images on the recording medium such that the vertical orientations of the images formed on both sides of the recording medium are coincide with each other..." This is not correct grammar. It will be construed that the claim should state "wherein said ink-jet recording apparatus which enables the printing unit to print images on the recording medium such that the vertical orientations of the images formed on both sides of the recording medium coincide with each other, wherein said ink-jet recording apparatus which enables the printing unit to print images on the recording medium such that the vertical orientations of the images formed on both sides of the recording medium coincide with each other..." Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-6, 9-10, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Regimbal (US Pat 6679600) in view of Minata et al (US Pat 5143904).

Regimbal discloses:

- {claim 1} An ink-jet recording apparatus (column 1, lines 20-30); a containing member (figure 1, reference 21); a printing unit comprising an ink-jet recording head which jets recording liquid onto the recording medium (figure 1, reference 40; column 1, lines 20-30); a conveyance unit and a conveyance path for conveying the recording medium, one side of which has been already printed, into the printing unit again, including reversing the recording medium in order to print image onto the other side thereof (figure 1, reference 66, 68; column 3, lines 6-38; column 3, line 64-column 4, line 4), wherein the recording medium is temporarily stopped in the conveyance path (column 3, line 64-column 4, line 4; when the medium is moving in one direction and then moved in the reverse direction, the medium is inherently stopped in the process)

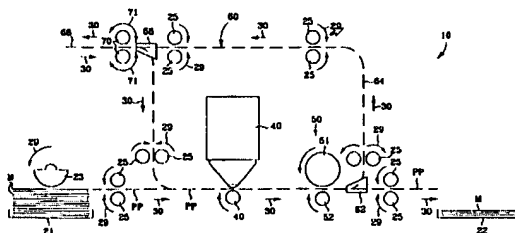


FIG. 1  
(Prior Art)

- {claim 3} An ink-jet recording apparatus (column 1, lines 20-30); a first containing member containing a first recording medium (figure 1, reference 22); a second containing member which contains a second recording medium (figure 1, reference 21); a printing unit comprising an ink-jet recording head which jets recording liquid onto the first recording head which jets recording liquid onto the first recording medium or the second recording medium (figure 1, reference 40; column 1, lines 20-30); a conveyance unit and a conveyance path for conveying the second recording medium, one side of which has already been printed, into the printing unit again in order to print image onto the other side thereof; and a unit which enables the printing unit to print image on the other side of the second recording medium such that the vertical orientations of the images printed both sides of the recording medium are coincide with each other, wherein: the second containing member containing the second recording medium is distinguishable from the first containing member (figure 1, reference 66, 68; column 3, lines 6-38; column 3, line 64-column 4, line 4), and wherein the second recording member is temporarily stopped in the conveyance path (column 3, line 64-

column 4, line 4; when the medium is moving in one direction and then moved in the reverse direction, the medium is inherently stopped in the process)

- {claim 5} wherein a heating unit is provided in the conveyance path (figure 1, reference 51)
- {claim 6} a containing member which temporarily contains the recording medium on the conveyance path (figure 1, reference 70)
- {claim 9} a recording medium heating unit having a heating range extending along the direction perpendicular to the recording medium conveyance direction so as to cover a range larger than the printing width of the recording medium (figure 1, reference 51)
- {claim 10} a rotation control mechanism which rotates the orientation of the recording medium by substantially 180 degrees (figure 1, reference 66, 68; column 3, line 64-column 4, line 4)
- {claim 12} a twisted path provided on the conveyance path, the shape of which is twisted so that the front and back sides of the recording medium, which passes through the twisted path, is turned upside down for substantially 180 degrees (figure 1, reference 66, 68; column 3, lines 6-38; column 3, line 64-column 4, line 4)
- {claim 18} A recording medium used in an ink-jet recording apparatus, which has a containing member which contains the recording medium; a conveyance path for conveying the recording medium; one side of which has been already printed, into a printing unit again, including reversing the recording medium in

Art Unit: 2853

order to print image onto the other side thereof; and a unit for printing images on the recording medium (figure 1; column 1, lines 20-30; column 3, lines 6-38; column 3, line 64-column 4, line 4); a base member (inherent)

- {claim 21} An ink-jet recording apparatus; a printing unit; a conveyance unit; a unit which enables the printing unit to print images; wherein the ink-jet recording apparatus which enables the printing unit to print images on the recording

Regimbal differs from the claimed invention in that it does not explicitly disclose:

- {claim 1} a recording medium which has a base member and granular material coated on both sides of the base member, and roughness of the surfaces of the coated granular material is smaller than the roughness of the base member; a unit which enables the printing unit to print an image on the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other
- {claim 2} wherein both sides of the granular material is substantially symmetrically coated on the base member with respect to the center line of the base member
- {claim 3} the second recording medium having a base member and a granular material coated on both surfaces of the base member, and roughness of both surfaces of the coated granular material is smaller than the roughness of the base member, and both granular material is substantially symmetrically coated on the base member with respect to the center line of the base member; a unit which enables the printing unit to print an image on the other side of the second

Art Unit: 2853

recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other

- {claim 18} granular material coated inside of the base member and also both sides of the base member, and roughness of the surfaces of the coated granular material is smaller than the roughness of the base member

Regimbal implicitly discloses:

- {claims 1 and 3} a unit which enables the printing unit to print an image on the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other (Regimbal teaches in the background of the invention that an imaging device in use is the copier (column 1, line 17). Regimbal also teaches the availability of duplex printing (column 3, lines 6-16). In light of these two teachings, though it is not explicitly stated, Regimbal naturally suggests that duplex printing of the same image can be performed on a media (which is also well known in the art). In this scenario, following the operation of the mechanism shown in figure 1, it is clear that the vertical orientations of the images printed on both sides of the recording medium coincide with each other)

Minato et al discloses:

- {claim 1} a recording medium which has a base member and granular material coated on both sides of the base member, and roughness of the surfaces of the coated granular material is smaller than the roughness of the base member



Art Unit: 2853

(column 7, lines 47-69; column 8, lines 3-9; column 13, lines 53-62; column 14, lines 8-9)

- {claim 2} wherein both sides of the granular material is substantially symmetrically coated on the base member with respect to the center line of the base member (column 5, lines 9-14, lines 32-36; front and back coated layers have correct thickness disclosed, they can be adjusted to have same thickness)
- {claim 3} the second recording medium having a base member and a granular material coated on both surfaces of the base member, and roughness of both surfaces of the coated granular material is smaller than the roughness of the base member, and both granular material is substantially symmetrically coated on the base member with respect to the center line of the base member (column 5, lines 9-14, 32-36; column 7, lines 47-59; column 8, lines 3-9; column 13, lines 53-62); column 14, lines 8-9)
- {claim 18} granular material coated inside of the base member and also both sides of the base member, and roughness of the surfaces of the coated granular material is smaller than the roughness of the base member (column 7, lines 47-59; column 8, lines 3-9; column 13, lines 53-62; column 14, lines 8-9)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Minata et al into the invention of Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of improved image quality with images of higher resolution.

Art Unit: 2853

Claims 7, 13-14, 16-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Regimbal (US Pat 6679600) in view of Minata et al (US Pat 5143904), as applied to claims 1-6, 9-10, 12, and 18, and further in view of Sekiya (US Pat 6338545).

Regimbal discloses:

- {claim 13} An ink-jet copier (column 1, line 17); a printing unit which jets ink onto a recording surface of a recording medium based on the image data provided from the scanner (figure 1, reference 40; column 1, lines 20-30); a recording medium conveyance unit disposed below the printing unit for conveying and ejecting the recording medium in a predetermined timing according to the recording operation (figure 1, reference 66, 68; column 3, lines 6-38; column 3, line 64-column 4, line 4); a containing member which contains a recording medium having a base member (figure 1, reference 21); the recording medium conveyance unit conveys the recording medium into a position that faces the nozzle surfaces of the multi-nozzle-type ink-jet recording head and conveys the recording medium, one side of which has been already printed, into the printing unit again, including reversing the recording medium in order to print an image onto the other side thereof (figure 1); the recording medium is temporarily stopped in a conveyance path (column 3, line 64-column 4, line 4; when the medium is moving in one direction and then moved in the reverse direction, the medium is inherently stopped in the process)
- {claim 14} a rotation control mechanism which rotates the orientation of the recording medium by substantially 180 degrees

- {claim 16} a plurality of recording media (figure 1, reference 21); a plurality of containing members containing the plurality of recording media (figure 1, reference 21-22); at least one of the plurality of recording media comprises a recording medium (figure 1, reference 21); the containing member, which contains the recording medium, is distinguishable from the other containing members (figure 1, reference 21)
- {claim 17} a recording medium heating unit that has a heating range extending along the direction perpendicular to the recording medium conveyance direction so as to cover a range larger than a printing width of the recording medium, on which the image is to be printed (figure 1, reference 51)
- {claim 19} A recording medium used in an ink-jet copier (figure 1, reference 17, 21); a recording unit having a multi-nozzle-type ink-jet recording head which jets ink (column 1, lines 20-30); a recording medium conveyance unit disposed below the printing unit for conveying and ejecting the recording medium in a predetermined timing according to the recording operation, the recording medium conveyance unit has a conveyance unit and conveyance path and conveys the recording medium into a position that faces the nozzle surfaces of the multi-nozzle-type ink-jet recording head and convey the recording medium, one side of which has been already printed, into the printing unit again, including reversing the recording medium in order to print images onto the other side thereof; and a unit which enables the printing of an image on the recording medium such that the vertical orientations of the images printed on both sides of

the recording medium coincide with each other (figure 1, reference 66, 68; column 3, lines 6-38; column 3, line 64-column 4, line 4); a base member (figure 1, reference 21)

Regimbal differs from the claimed invention in that it does not explicitly disclose:

- {claim 7} the ink-jet recording head has a multi-nozzle-type ink-jet recording head which jets ink with a frequency substantially from 1 kHz through 40 kHz per nozzle on demand and configured so as to join jets a plurality of colors of ink; the recording medium is conveyed to a position that faces the nozzle surfaces of the multi-nozzle-type ink-jet recording head during recording
- {claim 13} a scanner which reads an original image placed on an original table, so as to form image data therefrom in sequence; granular material coated on both sides of the base member, and roughness of the coated granular material is smaller than the roughness of the base member; the printing unit has a multi-nozzle-type ink-jet recording head which jets ink with a frequency from 1 kHz through 40 kHz per nozzle on demand, and the ink-jet recording head is arranged so as to jet a plurality of colors of ink
- {claim 16} both sides of the granular material is substantially symmetrically coated on the base member with respect to the center line of the base member
- {claim 19} a scanner unit which reads an original image placed on an original table, so as to form image data therefrom in sequence; recording head jets in with a frequency of 1 kHz through 40 kHz per nozzle on demand, the ink-jet recording head is arranged so as to jet a plurality of colors of ink, the recording unit jetting

ink onto a recording surface of the recording medium based on the image data provided from the scanner unit; granular material coated inside the base member and also both sides of the base member, and the roughness of the surfaces of the coated granular material is smaller than the roughness of the base member

- {claim 20} wherein both sides of the granular material is substantially symmetrically coated on the base member with respect to the center line of the base member

Regimbal implicitly discloses:

- {claims 13 and 19} a scanner which reads an original image placed on an original table, so as to form image data therefrom in sequence; the recording unit jetting ink onto a recording surface of the recording medium based on the image data provided from the scanner unit (naturally suggested in light of column 1, line 17 where a copier is disclosed as a known imaging device that is pertinent to the invention; scanner which reads original image so as to form data therefrom in sequence is well known to copier as is jetting ink in response to data provided from scanner unit); a unit which enables the printing unit to print an image on the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other (Regimbal teaches in the background of the invention that an imaging device in use is the copier (column 1, line 17). Regimbal also teaches the availability of duplex printing (column 3, lines 6-16). In light of these two teachings, though it is not explicitly stated, Regimbal naturally suggests that duplex printing of the same image can be

performed on a media (which is also well known in the art). In this scenario, following the operation of the mechanism shown in figure 1, it is clear that the vertical orientations of the images printed on both sides of the recording medium coincide with each other)

Minato et al discloses:

- {claim 13} granular material coated on both sides of the base member, and roughness of the coated granular material is smaller than the roughness of the base member (column 7, lines 47-59; column 8, lines 3-9; column 13, lines 59-62; column 14, lines 8-9)
- {claim 16} both sides of the granular material is substantially symmetrically coated on the base member with respect to the center line of the base member (column 7, lines 47-59; column 8, lines 3-9; column 13, lines 53-62; column 14, lines 8-9)
- {claim 19} granular material coated inside the base member and also both sides of the base member, and the roughness of the surfaces of the coated granular material is smaller than the roughness of the base member (column 7, lines 47-59; column 8, lines 3-9; column 13, lines 53-62; column 14, lines 8-9)
- {claim 20} wherein both sides of the granular material is substantially symmetrically coated on the base member with respect to the center line of the base member (column 5, lines 9-14 and 32-36; front and back coated layers can be adjusted to have same thickness)

Sekiya discloses:

- {claim 7} the ink-jet recording head has a multi-nozzle-type ink-jet recording head which jets ink with a frequency substantially from 1 kHz through 40 kHz per nozzle on demand and configured so as to jet a plurality of colors of ink (figure 8; column 12, lines 17-48)
- {claim 13} the printing unit has a multi-nozzle-type ink-jet recording head which jets ink with a frequency from 1 kHz through 40 kHz per nozzle on demand, and the ink-jet recording head is arranged so as to jet a plurality of colors of ink (figure 8; column 12, lines 47-48)
- {claim 19} recording head jets in with a frequency of 1 kHz through 40 kHz per nozzle on demand, the ink-jet recording head is arranged so as to jet a plurality of colors of ink (figure 8; column 12, lines 47-48)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Minata et al into the invention of Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of improved image quality with images of higher resolution.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Sekiya into the invention of modified Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of providing a liquid jet recording apparatus which eliminates nozzle clogging (column 3, lines 22-23). The combination naturally suggests the recording medium is conveyed to a position that faces the nozzle surfaces of the multi-nozzle-type ink-jet recording head during recording.

Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Regimbal (US Pat 6679600) in view of Minata et al (US Pat 5143904) and Sekiya (US Pat 6338545), as applied to claims 7, 13-14, 16-17, and 19-20, and further in view of Hotomi (US Pat 6036302).

Regimbal discloses:

- {claims 8 and 15} An ink jet recording apparatus/copier (as applied to claims 7 and 13 above)

Regimbal differs from the claimed invention in that it does not disclose:

- {claims 8 and 15} the nozzles of the ink-jet recording head are arranged longitudinally so as to cover a printing width of the recording medium on which the image is to be printed, and the nozzles have a cross-sectional area in a range between 10  $\mu\text{m}^2$  and 600  $\mu\text{m}^2$ , and the ink-jet recording head has 1000 through 10000 nozzles in the nozzle arrangement density of 400 dpi through 3200 dpi

Sekiya discloses:

- {claims 8 and 15} the nozzles of the ink-jet recording head are arranged longitudinally so as to cover a printing width of the recording medium on which the image is to be printed (figure 6, reference 50), and the nozzles have a cross-sectional area in a range between 10  $\mu\text{m}^2$  and 600  $\mu\text{m}^2$  (abstract)

Hotomi discloses:

- {claims 8 and 15} the nozzles have a cross-sectional area in a range between 10  $\mu\text{m}^2$  and 600  $\mu\text{m}^2$ , and the ink-jet recording head has 1000 through 10000



nozzles in the nozzle arrangement density of 400 dpi through 3200 dpi (column 7, lines 51-62)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Sekiya into the invention of modified Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of providing a liquid jet recording apparatus which eliminates nozzle clogging (column 3, lines 22-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Hotomi into the invention of modified Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of to print effectively on A4 paper.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Regimbal (US Pat 6679600) in view of Minata et al (US Pat 5143904) and Fukuda (US Pat 6533477).

Regimbal discloses:

- {claim 21} An ink-jet recording apparatus (column 1, lines 20-30); a containing member (figure 1, reference 21); a printing unit comprising an ink-jet recording head which jets recording liquid onto the recording medium (figure 1, reference 40; column 1, lines 20-30); a conveyance unit and a conveyance path for conveying the recording medium, one side of which has been already printed, into the printing unit again, including reversing the recording medium in order to print image onto the other side thereof (figure 1, reference 66, 68; column 3, lines 6-38; column 3, line 64-column 4, line 4)

Regimbal differs from the claimed invention in that it does not explicitly disclose:

- {claim 21} a unit which enables the printing unit to print images on the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other; wherein the ink-jet recording apparatus which enables the printing unit to print images on the recording medium such that the vertical orientations of the images formed on both sides of the recording medium coincide with each other has a memory for storing data that is used for printing an image on one side of the recording medium from bottom to top direction.

Regimbal implicitly discloses:

- {claim 21} a unit which enables the printing unit to print an image on the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other (Regimbal teaches in the background of the invention that an imaging device in use is the copier (column 1, line 17). Regimbal also teaches the availability of duplex printing (column 3, lines 6-16). In light of these two teachings, though it is not explicitly stated, Regimbal naturally suggests that duplex printing of the same image can be performed on a media (which is also well known in the art). In this scenario, following the operation of the mechanism shown in figure 1, it is clear that the vertical orientations of the images printed on both sides of the recording medium coincide with each other)

Minato et al discloses:

- {claim 21} a recording medium which has a base member and granular material coated on both sides of the base member, and roughness of the surfaces of the coated granular material is smaller than the roughness of the base member (column 7, lines 47-69; column 8, lines 3-9; column 13, lines 53-62; column 14, lines 8-9) .

Fukuda discloses:

- {claim 21} memory for storing data that is used for printing an image on one side of the recording medium from bottom to top direction (column 7, lines 3-19)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Minata et al into the invention of Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of improved image quality with images of higher resolution.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Fukuda into the invention of Regimbal. The motivation for the skilled artisan in doing so is to gain the benefit of improving image quality.

#### ***Allowable Subject Matter***

Claim 11 is allowed.

The following is an examiner's statement of reasons for allowance: The reasons for allowance were discussed in a previous action. However, the examiner would like to distinguish why this claim is allowable and claim 21 is not even though they seem to disclose similar subject matter. Claim 11 specifies that data is sent in reverse order so that the image data is printed on

the back side of the recording medium from bottom to top direction. Claim 21 doesn't mention that the back side of the recording medium is printed from bottom to top...it only specifies an image on one side. The inclusion of the notion of printing the back side of the medium from bottom to top is what set claim 11 apart.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

Applicant's arguments filed 10/31/05 have been fully considered but they are not persuasive.

The applicant argues that there is no teaching or suggestion in Regimbal of conveyance means configured to temporarily stop the recording medium in the conveyance path to allow the first side of the recording medium to dry before the recording medium is conveyed to the printing unit for printing on the second side of the recording medium. The examiner responds by noting that the function of temporarily stopping is inherent in reversing leg 66 because in physics, when an object is moved one direction and then moved in the reverse direction, it must necessarily first come to a stop. Furthermore, the claimed invention has no mention of temporarily stopping in order to allow drying; that is intended use that the applicant is trying to include in the argument.

With respect to the argument concerning claim 6, the applicant is right that there is no reference 20 in figure 1. That is a typo. The examiner meant to cite rollers 70 which hold the sheet and allow its reversal of direction.

With respect to the argument concerning claims 9 and 17, column 2, lines 50-58 clearly disclose using the roller to fuse the image on the medium; this could not occur if the heating range was inadequate to cover the medium. Even though figure 1 only shows a side view of the roller, it can easily be imagined that it does stretch across the whole medium, especially in light of column 2.

With respect to the argument concerning claims 10 and 13, Regimbal does disclose changing orientation of paper by a rotation of 180 degrees. It prints on one side and then inverts the sheet 180 degrees so that it can be printed on the other side. Though the orientation follows a long path instead of being immediately flipped does not negate the fact that the sheet does end up making a 180 degree orientation shift.

With respect to the argument concerning claim 12, figure 1, reference 25 clearly shows twisting of the sheet through a path defined by rollers so that the sheet turns upside down.

With respect to the arguments concerning the medium in Minato being directed to a thermal sublimation printing paper and not an inkjet paper, the examiner would like to refer to Arai et al (US Pat 6326055) simply as an illuminating reference. Column 1, lines 10-17 discloses "More particularly, the invention relates to an image-receiving sheet which has on a base sheet a dye- or ink-receiving layer for use in a variety of printing or recording processes by use of a variety of dyes or inks, preferably for use in printing or recording processes by **thermal transfer of sublimable dyes, thermal transfer of meltable dyes, or in ink jet printing...**"

(emphasis mine). Thus, we see that it is common in the art to use the same media for both thermal sublimation printing systems as well as ink jet printing systems. Therefore, there was nothing wrong in using the above combination.

With respect to the argument concerning the paper sectional configuration of Minato, even though the drawing doesn't show the sides to be symmetrical, the detailed description teaches that thicknesses can be adjusted implying that the sides can be made to be symmetrical.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Arai et al (US Pat 6326055) discloses image-receiving sheet for recording and process for the production thereof.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2853

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148.


The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

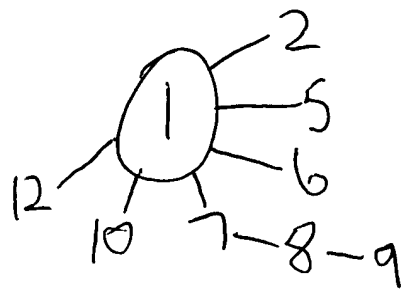
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MANISH S. SHAH**  
**PRIMARY EXAMINER**

11/06/06 Claim Tree for 10/690296



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